UNITED STATES PATENT AND TRADEMARK OFFICE

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FERENCE & ASSOCIATES LLC	CHEN, QING
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 January 2008*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-41* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All   b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This Office action is in response to the RCE filed on January 24, 2008.

2.   **Claims 1-41** are pending.

3.   **Claims 1, 21, and 41** have been amended.

4.   The objection to the specification is withdrawn in view of Applicant's amendments to the

specification.

5.   It is noted that the amended paragraph replaces the paragraph on Page 4, lines 8-12, not

Page 8, lines 8-12.

Response to Amendment

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

7.   **Claims 1, 2, 4-8, 11, 16-22, 24-28, 31, and 36-41** are rejected under 35 U.S.C. 103(a) as

being unpatentable over **US 5,721,824 (hereinafter "Taylor")** in view of **US 6,675,382**

(hereinafter "Foster").

As per **Claim 1**, <u>Taylor</u> discloses:

- determining existing relationship descriptions between components of the distributed system *(see Column 1: 7-11, "This invention relates to installing software products, herein referred to as software packages or packages, on computing systems either in a distributed processing computing system having a server and multiple clients ..."; Column 4: 52-59, "A primary package may have secondary packages on which it is dependent. A primary package may also be dependent from another primary package. Thus a primary package may be primary in one installation and secondary in another installation.")*;

- transforming acquired relationships into ordered tasks that are linked by temporal ordering constraints *(see Column 5: 3-11, "Installation dependency list 101 in FIG. 2A is exemplary of an distribution pack having multiple packages with dependencies. Package A and Package C are primary packages. Package C is also a secondary package in Package A's dependency list. Packages B and D are secondary packages in Package C's dependency list.")*; and

- creating an order of changes taking into account task relationship constraints *(see Column 5: 26-29, "An action list is a list of those dependent packages that will be subsequently installed by a trailer script after the present package (primary Package A in the example) is installed.")*.

However, <u>Taylor</u> does not disclose:

- wherein the components of the distributed system are implemented on a plurality of managed resources.

<u>Foster</u> discloses:

- wherein the components of the distributed system are implemented on a plurality of managed resources *(see Column 12: 13-27, "Embodiments of the invention provide a user with the ability to install software onto a client system from a remote source. Using the Internet, for example, a user may utilize the invention to access a URL that references package 200 either through the HTTP, the FTP, or other protocols." and "In one or more embodiments of the invention, package 200 is downloaded from a remote source onto the local file system of the computer where the software is to be installed.").*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of <u>Foster</u> into the teaching of <u>Taylor</u> to include wherein the components of the distributed system are implemented on a plurality of managed resources. The modification would be obvious because one of ordinary skill in the art would be motivated to provide a packaging system that can install or setup software from remote locations *(see <u>Foster</u> – Column 1: 58-64).*

As per **Claim 2**, the rejection of **Claim 1** is incorporated; and <u>Taylor</u> further discloses:

- wherein the order of changes is sequential *(see Column 6: 34-42, "During the first pass through the loop Package B is added to the action list, and during the second pass through the loop Package D is added to the action list. The action list now lists Packages C, B and D.").*

As per **Claim 4**, the rejection of **Claim 1** is incorporated; and <u>Taylor</u> further discloses:

- refining an incoming request for change by breaking the incoming request down into sub-requests *(see Figure 2A: 101; Column 5: 3-11, "Installation dependency list 101 in FIG. 2A*

is exemplary of an distribution pack having multiple packages with dependencies. Package A

and Package C are primary packages. Package C is also a secondary package in Package A's

dependency list. Packages B and D are secondary packages in Package C's dependency list.").

As per **Claim 5**, the rejection of **Claim 4** is incorporated; and <u>Taylor</u> further discloses:

-    computing an allowable order of changes by interacting with the distributed system

(see Column 6: 34-42, "During the first pass through the loop Package B is added to the action

list, and during the second pass through the loop Package D is added to the action list. The

action list now lists Packages C, B and D.").

As per **Claim 6**, the rejection of **Claim 1** is incorporated; and <u>Taylor</u> further discloses:

-    wherein creating the order of changes includes determining whether the ordered

changes are conflicting and flagging such conflicts *(see Figure 2A: 101; Column 4: 55-59,*

"Thus a primary package may be primary in one installation and secondary in another

installation."; Column 5: 17-21, "After operation 104 at the server has read the dependency list

for Package A, operation 106 gets the first entry off Package A's dependency list which is

secondary Package C on which Package A depends. Decision operation 108 tests whether the

dependent Package C has been installed.").

As per **Claim 7**, the rejection of **Claim 1** is incorporated; and <u>Taylor</u> further discloses:

-    wherein the order of changes are partially ordered *(see Column 6: 34-42, "During the*

first pass through the loop Package B is added to the action list ...").

As per **Claim 8**, the rejection of **Claim 1** is incorporated; and <u>Taylor</u> further discloses:

- wherein the order of changes are totally ordered *(see Column 6: 34-42, "... and during the second pass through the loop Package D is added to the action list. The action list now lists Packages C, B and D.")*.

As per **Claim 11**, the rejection of **Claim 1** is incorporated; and <u>Taylor</u> further discloses:

- wherein the creation of the order of changes further takes into account a requested change management operation *(see Figure 3: 130; Column 6: 52-53, "Operation 130 deletes the Package C entry from the action list. The action list now lists Packages B and D.")*.

As per **Claim 16**, the rejection of **Claim 1** is incorporated; and <u>Taylor</u> further discloses:

- accessing and evaluating policy rules representing best practices *(see Figure 3; Column 6: 22-24, "The trailer script module of FIG. 3 begins at decision operation 126 which detects if there is an entry on the action list.")*.

As per **Claim 17**, the rejection of **Claim 16** is incorporated; and <u>Taylor</u> further discloses:

- wherein the best practices include updating all affected software artifacts when a software artifact is updated *(see Column 6: 3-7, "Operation 122 installs the primary package; however, the difference now is that, following operation 122 and decision operation 124, the trailer script is executed. This is necessary since there are dependent packages on the action list that must now be installed.")*.

As per **Claim 18**, the rejection of **Claim 16** is incorporated; and <u>Taylor</u> further discloses:

-    wherein the best practices include having a given set of software components installed on different systems *(see Column 1: 6-9, "This invention relates to installing software products, herein referred to as software packages or packages, on computing systems ... in a distributed processing computing system having a server and multiple clients ...").*

As per **Claim 19**, the rejection of **Claim 1** is incorporated; and <u>Taylor</u> further discloses:

-    wherein one or more of the order of changes are persistently stored after being created *(see Column 5: 29-31, "If there is an action list, add module 112 adds the name of the dependent package to the action list.").*

As per **Claim 20**, the rejection of **Claim 1** is incorporated; and <u>Taylor</u> further discloses:

-    wherein a component is one of a service, an application, middleware, hardware, an operating system, a storage system, a network device, and a system associated with a computing environment *(see Figure 1: 45; Column 4: 52-53, "The distribution pack handled by this invention has multiple packages to be installed.").*

Claims 21, 22, 24-28, 31, and 36-40 are system claims corresponding to the method claims above (Claims 1, 2, 4-8, 11, and 16-20) and, therefore, are rejected for the same reasons set forth in the rejections of Claims 1, 2, 4-8, 11, and 16-20.

Claim 41 is a program storage device claim corresponding to the method claim above (Claim 1) and, therefore, is rejected for the same reason set forth in the rejection of Claim 1.

8.   **Claims 3, 9, 10, 23, 29, and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Taylor** in view of **Foster** as applied to Claims 1, 4, 21, and 24 above, and further in view of **US 6,952,825 (hereinafter "Cockx")**.

As per **Claim 3**, the rejection of **Claim 1** is incorporated; however, Taylor and Foster do not disclose:

-       wherein the order of changes is concurrent.

Cockx discloses:

-       wherein the order of changes is concurrent *(see Column 12: 40-44, "A scheduler in accordance with the second embodiment is called parallel if it can allow more than one thread to execute simultaneously in real time.")*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Cockx into the teaching of Taylor to include wherein the order of changes is concurrent. The modification would be obvious because one of ordinary skill in the art would be motivated to speed up the execution of a model in real time *(see Cockx – Column 12: 42-44)*.

As per **Claim 9**, the rejection of **Claim 1** is incorporated; however, Taylor and Foster do not disclose:

- wherein the order of changes includes an estimate of the time required to complete a change.

Cockx discloses:

- wherein the order of changes includes an estimate of the time required to complete a change *(see Column 19: 41-44, "… the 'local' time of a thread may include an estimate of the elapsed processing time for that thread when the thread is executed on a processing engine.")*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Cockx into the teaching of Taylor to include wherein the order of changes includes an estimate of the time required to complete a change. The modification would be obvious because one of ordinary skill in the art would be motivated to reduce non-determinism *(see Cockx – Column 4: 59-60)*.

As per **Claim 10**, the rejection of **Claim 4** is incorporated; however, Taylor and Foster do not disclose:

- wherein a total change time is minimized by exploiting parallelism between change tasks.

Cockx discloses:

- wherein the total change time is minimized by exploiting parallelism between change tasks *(see Column 12: 40-44, "A scheduler in accordance with the second embodiment is called parallel if it can allow more than one thread to execute simultaneously in real time. A parallel scheduler can exploit multi-processor hardware to speed up the execution of a model in real time.")*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the teaching of Cockx into the teaching of Taylor to include

wherein the total change time is minimized by exploiting parallelism between change tasks. The

modification would be obvious because one of ordinary skill in the art would be motivated to

speed up the execution of a model in real time *(see Cockx – Column 12: 42-44)*.

Claim 23 is rejected for the same reason set forth in the rejection of Claim 3.

Claim 29 is rejected for the same reason set forth in the rejection of Claim 9.

Claim 30 is rejected for the same reason set forth in the rejection of Claim 10.

9.   **Claims 12-15 and 32-35** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Taylor in view of **Foster** as applied to Claims 1 and 21 above, and further in view of **US**

6,345,294 (hereinafter "O'Toole").

As per **Claim 12**, the rejection of **Claim 1** is incorporated; however, Taylor and Foster do

not disclose:

- wherein a requester identifies one or more target systems within the distributed

system by name.

O'Toole discloses:

- wherein a requester identifies one or more target systems within the distributed

system by name *(see Column 13: 50-56, "The appliance registry operates a secure, coherent,*

highly available database that stores rarely accessed records about the relationship between

SODA appliances and SODA master nodes. The record contains the following information: ...

soda-node-name: string ...").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the teaching of O'Toole into the teaching of Taylor to include

wherein a requester identifies one or more target systems within the distributed system by name.

The modification would be obvious because one of ordinary skill in the art would be motivated

to publish material that can be subscribed to securely by these appliances *(see O'Toole – Column*

13: 33-37).

As per **Claim 13**, the rejection of **Claim 12** is incorporated; however, Taylor and Foster

do not disclose:

-   wherein the names of the target systems are unique physical identifiers.

O'Toole discloses:

-   wherein the names of the target systems are unique physical identifiers *(see Column*

13: 50-56, "The appliance registry operates a secure, coherent, highly available database that

stores rarely accessed records about the relationship between SODA appliances and SODA

master nodes. The record contains the following information: ... soda-node-id: MAC address

and serial number ...").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the teaching of O'Toole into the teaching of Taylor to include

wherein the names of the target systems are unique physical identifiers. The modification would

be obvious because one of ordinary skill in the art would be motivated to publish material that can be subscribed to securely by these appliances *(see O'Toole – Column 13: 33-37)*.

As per **Claim 14**, the rejection of **Claim 12** is incorporated; however, <u>Taylor</u> and <u>Foster</u> do not disclose:

- wherein the names of the target systems are logical names which refer to one or more physical systems.

<u>O'Toole</u> discloses:

- wherein the names of the target systems are logical names which refer to one or more physical systems *(see Column 13: 50-56, "The appliance registry operates a secure, coherent, highly available database that stores rarely accessed records about the relationship between SODA appliances and SODA master nodes. The record contains the following information: ... soda-node-name: string ...")*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of <u>O'Toole</u> into the teaching of <u>Taylor</u> to include wherein the names of the target systems are logical names which refer to one or more physical systems. The modification would be obvious because one of ordinary skill in the art would be motivated to publish material that can be subscribed to securely by these appliances *(see O'Toole – Column 13: 33-37)*.

As per **Claim 15**, the rejection of **Claim 1** is incorporated; however, <u>Taylor</u> and <u>Foster</u> do not disclose:

-    wherein a requester does not identify one or more target systems within the distributed system by name.

O'Toole discloses:

-    wherein a requester does not identify one or more target systems within the distributed system by name *(see Column 13: 50-56, "The appliance registry operates a secure, coherent, highly available database that stores rarely accessed records about the relationship between SODA appliances and SODA master nodes. The record contains the following information: ... soda-node-location: string ...").*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of O'Toole into the teaching of Taylor to include wherein a requester does not identify one or more target systems within the distributed system by name. The modification would be obvious because one of ordinary skill in the art would be motivated to publish material that can be subscribed to securely by these appliances *(see O'Toole – Column 13: 33-37).*

Claim 32 is rejected for the same reason set forth in the rejection of Claim 12.

Claim 33 is rejected for the same reason set forth in the rejection of Claim 13.

Claim 34 is rejected for the same reason set forth in the rejection of Claim 14.

Claim 35 is rejected for the same reason set forth in the rejection of Claim 15.

Response to Arguments

10.   Applicant's arguments with respect to Claims 1, 21, and 41 have been considered, but are moot in view of the new ground(s) of rejection.

Conclusion

11.   Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/QC/
March 14, 2008
/Wei Zhen/
Supervisory Patent Examiner, Art Unit 2191